Hints for Writing Project Proposals

Specific

The two page description at the beginning of the proposal should summarize the proposal so that a reviewer knows what to expect when reading the rest of it. It also should be helpful for any others who may not be reviewers, but need to understand and approve the general concept of the proposed research. This summary should not include information not explained in greater detail later in the proposal.

The heart of the project proposal is the first four sections of the research plan. These sections are: a) Specific Aims; b) Background and Significance; c) Preliminary Studies/Progress Report; d) Research Design and Methods

Some suggested lengths for these sections in single spaced pages are listed below. These lengths are very approximate, and should be modified depending on the expected audience of reviewers.

Specific aims – ½ page
Background and significance – 2 to 3 pages
Preliminary studies/progress report – 1 to 3 pages
Research design and methods – 5 to 10 pages

The specific aims should identify the research questions to be answered by the proposed research. Use hypotheses to be proven if these are non-trivial and it helps to clarify the aims. The specific aims are more detailed than the general objective of the project, and address research questions, not project outputs. These aims should not be preparation of outputs such as papers, reports, prototypes, etc.

The background and significance section should be detailed enough to convince a reviewer that the research addresses a significant problem. It should briefly explain the overall occupational health and safety problem, e.g. coal workers pneumoconiosis, miners hearing loss. It should more extensively discuss why this particular project is needed and the research questions to be resolved. It is important to clarify why this particular project is needed, as opposed to all the other possible projects that might be proposed to address the same overall health and safety problem. For example, it is not sufficient to explain that roof falls are a problem in mining. The proposal should also justify why the proposed approach to preventing roof falls is new and more promising than other possible approaches to the same problem. The relevant literature should be discussed to show what is already known about the technical problem, and the knowledge gap which still exists that can be filled by the proposed research. The background and significance section will be more important for competitive proposals written for NIOSH-wide solicitations like NORA. These proposals compete against other proposals in different problem and technical areas. The background section then must be more convincing as to why this particular mining health and safety problem is important. Proposals written for the Laboratory base program have already been determined by the Laboratory lead team to address a significant health and safety problem. They will be sent to external reviewers who are expert in the field and will usually know the significance of the problem.

The preliminary studies section should discuss work already done in this area by the authors. If this is a follow-up to another project which is ending, explain what was accomplished in the preceding project, and the research questions which remain to be answered by this proposed project. If this is an entirely new project for the authors, explain the preliminary work done before or during preparation of the proposal. Explain highlights found in the technical literature and discussions with others working in this field. Reviewers should believe that you have already done an extensive search of the relevant literature and contacted persons important for the success of the research before you submitted the proposal. Explain any contacts made such as with mines or other field sites and the degree to which others have agreed to help with the research. Do not make a literature search and initial contacts with key people part of your research project tasks. Most of this work should already have been done before the proposal was submitted.

The research design and methods section is the most important part and should be the most detailed section of any research proposal. This is the section of the proposals that the reviewers are expected

to read the most carefully and to comment on most extensively. This section should explain what you expect to do to answer the questions posed in your specific aims section. Normally this section will be broken into a number of tasks to be performed. Each task should be described and the sequence and duration of the tasks clarified in a table or Gantt chart. The design of experiments and statistical analysis to be used should be described. If necessary, seek the help of the staff of the Mining Program Division Surveillance & Research Support personnel for this part of the proposal. This section should also describe the research methods to be used. This should be in sufficient detail to convince a reviewer that you actually know how to do this research, and will not have to learn as you go along. On the other hand do not include any standard operating procedures, but mention that they are available and will be used when needed.

The summary material at the end of the proposal is for use in IRIS and for NIOSH R2P planning. Such sections may be copied from other parts of the proposal, if appropriate.

General

Use the spell check and grammar check features of the word processor. Don’t count on your supervisor or other internal reviewers to catch errors. Spelling errors can cause reviewers to assume that the author does not do careful work.

Take advantage of any opportunities to become involved with the NIOSH grant process or to be part of a contract RFP technical evaluation committee. It can be very revealing to see the effort that usually goes into the preparation of proposals for competitively funded government research.